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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,577	08/31/2001	Kota Kiyama	35.C15744	9442

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EXAMINER

TRAN, LY T

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 10/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/942,577

Applicant(s)

KIYAMA, KOTA

Examiner

Ly T TRAN

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuruoka (USPN 5,502,545).

With respect to claims 1 and 6, Tsuruoka discloses a recording apparatus for rotating an endless belt member and supplying electricity to the belt member so as absorb a recording medium to the surface of the belt member and performing a recording on the recording medium by a recording device (Column 5: line 52-62) and a recording medium conveyance apparatus comprising conveyance mechanism comprising a belt (Fig.2: element 4) which conveys by rotating while contacting a recording medium and a fastening force generation mechanism for fastening the recording medium to the belt (Fig.2: element, Column 8: line 26-29) comprising:

- An electrical feeding member capable of supplying electricity to the belt member comprising a portion to be fed at a first voltage value for fastening the recording medium (Fig.2: element 35) or a second voltage value for releasing an the attraction of the recording medium to a position of the

endless belt member located opposed to the recording device (Fig.2: element 37, Column 12: line 5-19)

- A conveyance failure detection element for detecting a conveyance failure of the recording medium (Column 8: line 60-63)
- A control portion for performing a control of belt member and electrical feeding member based on a detection signal of the conveyance failure detection element, the electrical feeding member feeding the second electrical voltage value to the position of the endless belt member located opposed to the recording device (Fig.2: element 37, Column 11: line 11-67, Column 12: line 1-19 and Abstract)

With respect to claim 3, discharge portion for discharging a recording medium outside the apparatus and the conveying failure detection element is a discharge conveyance failure detection element for detecting the conveyance failure of the recording medium in the vicinity of the discharge portion (Fig.2: element S9).

With respect to claim 11, Tsuruoka discloses a recoding apparatus conveying mechanism for conveying a recording medium by using an endless belt member (Fig.2: element 4) rotating in contact with the recording medium to a position opposed to a recording device and an attracting device for attracting the recording medium to the endless belt member at the position opposed to the recording medium (Fig.2: element 35, 37, Column 8: line 26-29) comprising:

- A conveyance failure detection element for detecting a conveyance failure of the recording medium (Column 8: line 60-63)

- " Control portion for controlling the attracting device to reduce or remove an attraction force of the endless belt member at the position opposed to the recording device according to the detection of the conveyance failure by the conveyance failure detection element (Fig.2: element 37 Column 11: line 11-67, Column 12: line 1-19 and Abstract).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuruoka (USPN 5,502,545) in view of Stoeberl (USPN 4,549,826).

Tsuruoka fails to teach the conveyance failure element detects a separation gap of the recording medium on the belt member from the belt member in the direction of the recording device.

Stoebert teaches a sensor coupled to the paper leveling gap, detecting curl paper ends, folds at the end of the roll that are too pronounced and that could potentially lead to jamming of the paper (Column 1: line 11-12, line 45-52) sensing means for detecting the moveable member further away from stationary member than the minimum preset width of the gap (Column 3: line 36-47, line 46-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made with a sensor coupled to the paper leveling gap, detecting curl paper ends, folds at the end of the roll that are too pronounced and that could potentially lead to jamming of the paper sensing means for detecting the moveable member further away from stationary member than the minimum preset width of the gap as taught by Stoeberl. The motivation of doing so is in order to avoid a malfunctioning paper feed therefore obtain a high paper consumption.

3. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuruoka (USPN 5,502,545) in view of Tanno et al. Yoshiyama (USPN 5,555,076)

Tsuruoka fails to teach recording device is an ink jet recording head and ink jet recording head uses a thermal energy as energy for emitting the ink.

Tsuruoka discloses the claimed invention except that using photosensitive instead of thermal ink jet head. Yoshiyama shows that photosensitive and thermal ink jet head is an equivalent structure known in the art. Therefore, because these two photosensitive and thermal ink jet head are art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the thermal ink jet head for photosensitive.

4. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuruoka (USPN 5,502,545) Tanno et al. (USPN 6,309,064).

Tsuruoka fails to teach recording device is an ink jet recording head and ink jet recording head uses a thermal energy as energy for emitting the ink, and the fastening force generation mechanism comprises a plurality of electrodes which line up in such a manner as to be long the surface contacting the recording medium of the belt and an electrical feeding member for applying a voltage in such a manner that the adjacent electrodes have different potentials and plurality of electrodes are provided in the belt.

Tanno et al. teaches recording device is an ink jet recording head and ink jet recording head uses a thermal energy as energy for emitting the ink (Fig. 1, 6: line 59-677: line 1-5) and the fastening force generation mechanism comprises a plurality of electrodes which line up in such a manner as to be long the surface contacting the recording medium of the belt and an electrical feeding member for applying a voltage in such a manner that the adjacent electrodes have different potentials and plurality of electrodes are provided in the belt (Fig. 6, Column 8: line 1-10, line 34-46).

With respect to claims 14 and 15, Tsuruoka teaches applying electricity to the belt member so as to absorb a recording medium to the surface of the belt (Column 5: line 52-62), detecting conveyance failure (Column 8: line 60-63) and based on the detection, destaticize the transfer belt (Abstract). While Tsuruoka does not specifically disclose that control portion control the electrical feeding member in such a manner that the potentials of plurality of electrodes are equalized according to the detection of the conveyance failure by the conveyance failure detection element and control portion performs an elimination of the charge which is charged in the plurality of electrodes

according to the detection of the conveyance failure, it does provide the general teaching of cutting of the voltage, so as to easily to remove the paper jam.

It would have been obvious to one having ordinary skill in the art at the time the invention was made with the fastening force generation mechanism comprises a plurality of electrodes which line up in such a manner as to be long the surface contacting the recording medium of the belt and an electrical feeding member for applying a voltage in such a manner that the adjacent electrodes have different potentials and plurality of electrodes are provided in the belt. The motivation of doing so is in order to define a gap between the printing surface and the recording medium and printing sheet is sucked toward the transporting belt therefore, the printing sheet may not float on the side of the printing head to permit stable print (Tanno et al. USPN 6,309,064, Column 9: line 50-53).

### ***Response to Arguments***

5. Applicant's arguments filed 7/29/02 have been fully considered but they are not persuasive.

Applicant's argument that the corotrons 37 in the invention of Tsuruoka to destaticize the transfer belt are not located opposed to the recording device is not persuasive because refer to figure 2, the corotron 37 is in the position opposed to the recording device. Therefore, Tsuruoka meets the limitation of the claim.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T TRAN whose telephone number is 703-308-0752. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0967.



October 3, 2002



John Barlow  
Supervisory Patent Examiner  
Technology Center 2800